APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,063	10/15/2001	Jin-Hsin Yang	ASU 128	1643

7590   06/09/2004

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EXAMINER
MASKULINSKI, MICHAEL C

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/976,063	YANG, JIN-HSIN
		Examiner	Art Unit
		Michael C Maskulinski	2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 October 2001*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-3* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *15 October 2001* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☒ All　b) ☐ Some * c) ☐ None of:

　　　　1. ☒ Certified copies of the priority documents have been received.

　　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/28/01*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

Non-Final Office Action

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams,

U.S. Patent 6,401,222 B1.

Referring to claim 1:

a.   In column 5, line 63, Adams disclose a central processing unit. In column

6, lines 63-64, Adams discloses that the drivers may include a timer device driver

including a timer ISR, interfacing to the system clock. In column 7, lines 6-12,

Adams discloses that the media driver may be responsible for sending

instructions and control signals to the media drive controller which is typically

embodied as a floppy diskette controller. Similarly, the media driver may instruct

and control the DMA controller. The DMA controller manages data transfers

between the floppy diskette controller and the main memory device (a floppy

diskette, a floppy diskette controller for controlling the data transfer to the floppy

diskette). In column 7, lines 12-17, Adams discloses that a DMA request

(DREQ) may pass from FDC controller to the direct memory access controller.

Likewise, a DMA acknowledge (DACK) may be returned from the DMA controller to the FDC (peripherals associated with the floppy diskette controller for providing a DMA request (DREQ) and a DMA acknowledgement (DACK), the DREQ being issued when data transfer is requested by the computer system and the DACK being issued when data transfer is permitted).

b.   In column 7, lines 27-28, Adams discloses that read operations are equally susceptible to the problem and may be used in the detection process (determining if a requested computer system operation accesses the data from a FDC).

c.   In column 8, lines 3-6, Adams discloses timing the last byte of a sector's DREQ to DACK signals (measuring the time for DMA request (DREQ) from the issue to the removal).

d.   In column 12, lines 58-64, Adams discloses that the channel corresponding to the DMA communication with the FDC may be masked until the time elapsed for the transfer of the data to the sector has exceeded the maximum time permitted for such transfer. Thus, any and all opportunities for writing the last byte to the sector had expired. Thus, an error condition has been assured (signaling an error from the computer system if the measured time exceeds a specific value).

Referring to claim 2:

a.   In column 7, lines 31-36, Adams discloses that in a PC/MS-DOS environment, this can be accomplished by "hooking" the INT 0x13 interrupt

vector and directing it to the FDD prefix or interposer routine (pre-hooking an interpose service routine to an interrupt vector intercepted by the system interrupt clock)

b.   In column 7, lines 31-36, Adams discloses reprogramming the timer to interrupt faster than normal (increasing the interrupt rate provided by the system interrupt clock, wherein the measured time is performed through the interpose service routine for every interrupt)

c.   In column 7, lines 55-60, Adams discloses that the system clock may be reprogrammed in a suffix routine appended to the floppy device driver. The system clock may then interrupt normally. The timer interrupt is "unhooked" until the test reports the next floppy write operation (recovering the system interrupt clock to interrupt normally after the floppy diskette data transfer is completed and unhooking the interrupt vector).

Referring to claim 3:

a.   In column 5, line 63, Adams disclose a central processing unit. In column 6, lines 63-64, Adams discloses that the drivers may include a timer device driver including a timer ISR, interfacing to the system clock. In column 7, lines 6-12, Adams discloses that the media driver may be responsible for sending instructions and control signals to the media drive controller which is typically embodied as a floppy diskette controller. Similarly, the media driver may instruct and control the DMA controller. The DMA controller manages data transfers between the floppy diskette controller and the main memory device (a floppy

diskette, a floppy diskette controller for controlling the data transfer to the floppy diskette). In column 7, lines 12-17, Adams discloses that a DMA request (DREQ) may pass from FDC controller to the direct memory access controller. Likewise, a DMA acknowledge (DACK) may be returned from the DMA controller to the FDC (peripherals associated with the floppy diskette controller for providing a DMA request (DREQ) and a DMA acknowledgement (DACK), the DREQ being issued when data transfer is requested by the computer system and the DACK being issued when data transfer is permitted).

b.   In column 7, lines 27-28, Adams discloses that read operations are equally susceptible to the problem and may be used in the detection process (determining if a requested computer system operation accesses the data from a FDC).

c.   In column 7, lines 31-36, Adams discloses reprogramming the timer to interrupt faster than normal (programming the system interrupt clock to increase the interrupt rate provided by the system interrupt clock, wherein the existence of DMA request (DREQ) is detected for every interrupt issued by the system interrupt clock).

d.   In column 7, lines 37-49, Adams teaches calling the floppy diskette service routine of the computer system so as to access the data from the floppy diskette.

e.   In column 8, lines 3-6, Adams discloses timing the last byte of a sector's DREQ to DACK signals (measuring the time for DMA request (DREG) from the issue to the removal and recording the maximum time).

f.   In column 12, lines 58-64, Adams discloses that the channel corresponding to the DMA communication with the FDC may be masked until the time elapsed for the transfer of the data to the sector has exceeded the maximum time permitted for such transfer. Thus, any and all opportunities for writing the last byte to the sector had expired. Thus, an error condition has been assured (signaling an error from the computer system if the measured time exceeds a specific value).

g.   In column 7, lines 55-60, Adams discloses that the system clock may be reprogrammed in a suffix routine appended to the floppy device driver. The system clock may then interrupt normally. The timer interrupt is "unhooked" until the test reports the next floppy write operation (reprogramming the system interrupt clock to recover the interrupt at a normal rate).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,423,029	Schieve
U.S. Patent 5,983,002	Adams
US 2003/0023907 A1	Neudeck

The Examiner would like to note that Neudeck was filed before the Applicant's Application and has been cited because the inventions are similar.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Maskulinski whose telephone number is (703) 308-6674. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MM

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